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Received - 2021-11-01 10:36:02 AM Control Number - 52373 ItemNumber - 197

#### PROJECT NO. 52373

REVIEW OF WHOLESALE \$ PUBLIC UTILITY COMMISSION \$ 
ELECTRIC MARKET DESIGN \$ OF TEXAS

# Cypress Creek Renewables, LLC Response to PUCT Staff's Request for Comments

Pursuant to Public Utility Commission of Texas ("Commission") procedural rules Cypress Creek Renewables, LLC ("Cypress Creek") files this response to the Commission's request for written comments filed on October 26, 2021 in Project No 52373 ("52373"), Review of Wholesale Electric Market Design. The request for written comments asks that parties file responsive briefs by noon on November 1, 2021, so this filing is timely.

### Introduction

Cypress Creek is an active developer, owner, and operator of battery energy storage and solar energy facilities interconnected throughout the ERCOT region. Cypress Creek made a previous filing on September 30, 2021 that set out two key issues confronting the interdependent natural gas and bulk power systems in Texas:

- The failure of the market to develop adequate *reliable* capacity to meet demand in ERCOT during extreme weather events, particularly during the winter period; and
- 2. The need to continually assess and adapt the system to account for a changing generation mix and to capitalize on the potential system values of new technologies.

### **Cypress Creek Evaluation Framework**

We recommend reforms within and outside of the ERCOT wholesale electricity market to address these issues, to be evaluated vis-à-vis three overarching market objectives:

Ensuring Resource Adequacy. A reliable system requires sufficient effective capacity in the system
to meet demand at any point in time with a diverse portfolio of resources at least cost.

- Ensuring Resource Reliability. Targeting a planning reserve margin is insufficient capacity has to show up when the system needs it, which may not happen at times because it is on forced outage or cannot access the fuel that it needs at that time.
- Ensuring Effective System Operation. While the energy market is effective at incentivizing resources to operate in a way that is consistent with system needs, Ancillary Services are critical to ensuring that ERCOT has the tools it needs to meet demand in real-time and maintain system power quality in the face of large generator and load outages, as well as variability and uncertainty around real-time supply and demand.

Our recommendations address these objectives in accordance with first principles: market design reforms should be non-discriminatory and transparent, and should enable easy market entry and exit, such that all resource types and market participants can effectively respond to market signals (prices) and achieve an optimal reliable resource mix at least cost. It is important to consider the timeframes over which different reform options can and should be rolled out – we propose the following:

- 1. "Near-term" reforms, where no-regrets, low risk changes can be identified within the broad contours of the existing market structure and codified through the 52373 process by the PUCT, or in cases where such reforms are already underway, identified as high-priority to ensure no slippage in (or better yet, the expediting of) milestones; and
- 2. "Medium-term" reforms, where reform options possess some potential to address important issues but represent material changes to the status quo, thus posing risks to a power system that sustains tens of millions of Texans today and through which many billions of dollars are transacted each year; these should be identified over the course of this process and scheduled for immediate further study (including cost-benefit analyses) by the Commission/ERCOT, and then subsequently implemented (or not) in accordance with the findings of these studies.

# **Cypress Creek Recommendations**

We have set out below specific recommendations that can meet the three key objectives listed above and identify an associated timeline over which they should be implemented. Given the breadth of stakeholder proposals, our intent is to clearly indicate which objective(s)/problem(s) each of our proposals solve. A similar evaluation framework may be useful for Staff to employ in the future, to help better define the complex problem and organize solutions. We also respond directly to the most germane Staff questions issued October 26, 2021.

### Resource Adequacy

In the near-term, we continue to support study and revisions to the ORDC curve, and in principle support those proposed in Commission Lake's Memo on October 20, 2021. A reduction in VOLL and an increase in the MCL creates a more stable stream of revenues that help move the market away from a crisis-based model. A more stable and predictable ORDC construct will send a more potent investment signal. Any resource that can deliver MWhs to meet the ORDC construct should continue to compete to do so in a resource-neutral setting based on their cost and technology attributes, and any discriminatory changes to eligibility would result in unintended consequences detrimental to resource adequacy as we and others have noted in prior comments.

Because of this potential for unintended consequence, integral to any market design change regardless of whether we think it can be prudently implemented in the near-term is close study of the costs and benefits, as well as the impacts to competitive market dynamics. Such studies should be done prior to implementing any changes and should give stakeholders opportunities to review and provide feedback. Implementation should not proceed before such a study is complete. We appreciate the Commissioners' request to the Brattle Group during the workshop on October 21, 2021 for further study of various ORDC iterations. Assuming that this can be done over the coming months, we believe changes

can be implemented by 2022, but we would caution the Commission from rushing this – reforms should not be implemented until they have been fully studied via independent analysis, and a subsequent stakeholder process has taken place.

In the medium term, the Commission should strongly consider the merits of placing a reliability obligation ('RO') on load service entities ('LSE'), such as the one proposed by Energy and Environmental Economics in their September 30, 2021 filing ('E3's Report'), as well by Commissioner Lake in his Memorandum posted on October 20, 2021 ('Lake's Memo'). The LSE RO mechanism, if designed properly, has the potential to be a *reliable* and *efficient* means of achieving Resource Adequacy *and* Resource Reliability via changes that are non-discriminatory and cost efficient.

In terms of being *reliable*, the primary market constructs deployed in North America that directly target a reliability standard are the LSE RO and a more traditional capacity market. The latter would represent a material break from ERCOT's existing model, which has resulted in billions in consumer cost savings for Texans since implementation. Other mechanisms, such as ORDC modification and targeted capacity payments, though they can attempt to target a reliability standard, are ultimately indirect means of doing so and may not achieve the desired result. Resource firming requirements, strategic out-of-market reserves, or additional Ancillary Service procurements with administratively predetermined minimum duration requirements designed to procure additional capacity are not market-based and would be unduly costly. For these reasons, the LSE RO presents a more reliable mechanism than others for incentivizing sufficient capacity to meet a reliability standard within the ERCOT construct, if prudently implemented.

In terms of *efficiency*, the LSE RO allows for the direct targeting of a precise level of capacity and allows for resources providing capacity to continue to participate in the energy and ancillary services markets, thus only representing a 'top up' payment if these other markets are insufficient on their own

to achieve the desired level of capacity. Using indirect methods such as ORDC or capacity payments on their own, or resource firming, out-of-market reserves, or ancillary services as methods for targeting certain levels of capacity will inevitably be unduly costly for several reasons:

- If capacity payments or ORDC are used as the primary mechanisms for targeting a certain reserve margin, such mechanisms by themselves will not reliably and efficiently meet the desired level if payment levels are too high, more capacity than is needed will be built (overpaying); if too low, this will result in inadequate resources, which can entail material costs as seen with Uri.
- A strategic reserve or procurement of additional Ancillary Services as a means of acquiring additional capacity both effectively require keeping capacity on standby; not allowing resources to participate in the energy market to recover some of their revenue requirement raises the \$/MWh needed to ensure cost recovery. Such payments under these mechanisms need to fully recover the revenue requirement of the procured capacity, as opposed to being a 'top up' payment.
- Resource firming at the resource entity level to an administratively set level (e.g., % nameplate) is arbitrary, and resource design decisions should be optimized through the market. Requiring an arbitrary level of 'firmness' in some form imposes cost without necessarily introducing any benefits and may force the uneconomic exit of many generators, including thermal resources that face increased maintenance requirements, ultimately diminishing Resource Adequacy.

Most importantly, the LSE RO would have material benefits vis-à-vis the Resource Reliability issue that we see today, particularly signaling the need for firm fuel across the generation fleet, and would do so limited costs, as we describe in the next section. The same cannot be said for the other mechanisms.

We therefore believe that the LSE RO proposal warrants serious consideration. The Commission should further clarify the general contours of such an obligation and study its costs and benefits. Upon

confirming net benefits, in its Final Order the Commission should endorse the concept and identify the principles and framework characteristics to be implemented at ERCOT. Such principles may include, but should not be limited to:

- Design the program to apply accreditation in a resource-neutral fashion, based on actual expected seasonal performance, consistent with statutory guidelines and precedent.
- Design the program to ensure that it does not unduly burden small/new retailers, maintaining a competitive retail environment and addressing market power concerns.
- Design the program to implement robust performance incentives that ensure that resources
  perform in accordance with the products that they voluntarily offer and are compensated for.

The Commission should direct ERCOT to engage in an extended stakeholder engagement process, with direction to derive the mechanism design details needed to meet a reliability standard determined by the Commission (e.g., a 1-in-10 Loss of Load Expectation). However, the Commission should not dictate implementation details ex ante – rather, ERCOT should be instructed to derive these, including a target reserve margin, capacity accreditation process and framework, performance mechanisms, market power mitigation framework, and more. ERCOT should have the flexibility to adjust these details over time as market conditions change.

We provide additional feedback on specific elements of this framework in our responses to Staff's questions below, though we would reiterate that the details should ultimately be decided through a process at ERCOT, and not through this regulatory proceeding.

# Resource Reliability

In the near-term, the weatherization docket remains a valuable opportunity to consider increasing common-sense requirements on energy infrastructure so that it performs reliably during extreme weather events, since the market has failed to do so in the past despite significant revenue

upside potential for prepared generators. ORDC reform may also marginally improve the incentive for resources to weatherize and provide reliable services, insofar as it results in a more consistent set of payments that may allow for weatherized resources to finance investment in enhancing resilience more easily as a means of capturing these upsides. However, due to limits to Commission jurisdiction and failure by the market to address these issues in the past, more is likely to be needed to address the problems underlying Uri. We think that the LSE RO can economically do so.<sup>1</sup>

In the medium term, the LSE RO would create price signals to ensure resource reliability needs in the market are met at least cost. Resources that are appropriately weatherized under the LSE RO construct should receive materially higher capacity credit than resources that are not, allowing them to access higher revenues. Furthermore, they would benefit from performance rewards in the case that they overperform, while incurring penalties in cases of underperformance, creating strong incentives to show up and a reasonable expectation of cost recovery of investments that enhance reliability.

### System Operation

In the near-term, ERCOT should redouble efforts to implement the real-time co-optimization of ancillary services and energy, but also implement ongoing refinements to existing ancillary services that encourage faster responding, more cost-efficient inverter-based resources. It should broaden eligibility to supply Ancillary Services to ensure that this can be done in a resource-neutral fashion.

In the medium term, the Commission should task ERCOT to study the need for further refinements to existing Ancillary Services and the possible introduction of new products to meet the needs of the changing electricity system. As noted in our prior comments, this could include but should not be limited to a product or mechanism to compensate resources for the provision of inertia.

<sup>&</sup>lt;sup>1</sup> As previously identified in our Sept 30, 2021 comments, this is because private investment in high impact, low probability events has proven insufficient, and made more challenging by imperfect forecasts of these events.

# **Commission Staff Questions**

Commission staff posed a series of questions in their Memorandum posted on October 26. Our answers to select questions<sup>2</sup> are as follows:

1. The ORDC is currently a "blended curve" based on prior Commission action. Should the ORDC be separated into separate seasonal curves again? How would this change affect operational and financial outcomes?

We do not believe that the ORDC should be separated into seasonal curves. We acknowledge that there are some reasons for doing so – varying demand levels and generation resource characteristics across seasons, and correspondingly, varying loss of load probabilities at different levels of operating reserves – but think that the Commission should avoid implementing too many changes simultaneously, which may have unintended consequences that become increasingly difficult to anticipate as more layers of change are added. When it comes to the ORDC, we think that an annual curve is sufficient, and that the focus should be on adjusting the VOLL and shape.

- 2. What modifications could be made to existing ancillary services to better reflect seasonal variability? It is not clear that modifications are needed to reflect seasonal variability. ERCOT should continue to account on an ongoing basis for differences in relevant system dynamics outages, variability, and uncertainty of load and generation in determining the amount of ancillary services to procure at any point in time. We support a seasonal approach to obligations on LSEs and capacity accreditation of resources under an LSE RO in the future this would obviate the need for a seasonal (winter) AS product, which is effectively a backdoor capacity procurement.
- 3. Should ERCOT develop a discrete fuel-specific reliability product for winter? If so, please describe the attributes of such a product, including procurement and verification processes.
  No, enhancement of fuel reliability is a question of resource adequacy and reliability. The ancillary services market is a suboptimal place to meet these objectives. It would be an unduly expensive

<sup>&</sup>lt;sup>2</sup> Questions are indicated in underlined and italicized text, and are numbered and lettered in alignment with Staff's posting.

mechanism for doing so, as it is overly administrative and does not allow resources to achieve reliable fuel supply in a flexible fashion. Instead, more reliable fuel supply should be effectuated through regulatory weatherization requirements and through more robust and reliable market mechanisms contemplated in the LSE RO, which would create an additional layer of corresponding performance penalties and rewards.

4. Are there alternatives to a load serving entity (LSE) Obligation that could be used to impose a firming requirement on all generation resources in ERCOT?

Implementing a generation resource firming requirement without a corresponding capacity product is non-sensical – there is no precedent or basis for this and doing so would be arbitrary and discriminatory. Resource 'firming' requirements only make sense in the case that resources had offered and were being paid for some product (i.e., providing capacity at a time when the system needed it), in which case it is fair and reasonable to place a performance obligation on resources to meet these commitments, penalizing them in instances where they fall short and rewarding them where they overperform. The LSE RO could establish non-discriminatory treatment of firm supply across all generator types, allowing the market to find the economically optimal resource mix for providing reliable capacity. If the regulator sets a resource specific administrative level, this will inevitably result in higher costs without any corresponding reliability benefits. A blanket firming requirement to an arbitrary level in the absence of an LSE RO would instead lead to market exit for a number of resource types, including thermal resources, and would result in a costlier system without achieving the end goal, which is adequate levels of reliable (not necessarily 'firm') capacity.

5. <u>Are there alternatives to an LSE Obligation that could address the concerns raised about the stakeholder proposals submitted to the Commission?</u>

The only alternative that directly targets a reliability standard in a comparably efficient fashion is a capacity market. This would entail a substantial overhaul of the current system, which we do not propose.

**Note:** in our answers to selected questions below, we try to address the Staff's concerns about different aspects of the LSE RO. However, we do not propose that the Commission adopt our design elements and implement them. Rather, as mentioned above, we think that the Commission should establish the overarching framework and identify key issues to be studied and principles guiding those issues, and then direct ERCOT to study this construct and undertake a robust stakeholder process before determining the details of the design.

- 6. <u>How can an LSE Obligation be designed to protect against the abuse of market power in the</u> wholesale and retail markets?
  - a. <u>Will an LSE Obligation negatively impact customer choice for consumers in the competitive retail electric market in ERCOT? Can protective measures be put in place to avoid a negative impact on customer choice? If so, please specify what measures.</u>

An LSE obligation can be designed in such a way that does not negatively impact consumer choice.

The main issue to avoid is a diminishment in the competitive environment due to increased barriers to entry or the favoring of large incumbents in some way. It will be critical to carefully design a system that achieves the end goal (a certain level of reliability) but also provides flexibility for dealing with varying levels of load served over time. In particular, new retailers needs to be able to effectively comply with the LSE obligation at reasonable cost, even if a forward obligation deadline ("LSE Showing", in E3's Report) is only several months out, and existing retailers that see net customer attrition or acquisition must be able to flexibly adjust over time to ensure that they don't incur undue costs. This can be achieved by creating a flexible system for transferring capacity rights between LSEs, and a robust backstop when LSEs fall short (e.g., not unduly punitive Alternative Compliance Payments).

b. <u>How can market power be effectively monitored in a market where owners of power generation also own REPs that serve a large portion of ERCOT's retail customers?</u>

Market monitoring measures are well established in ERCOT today, and in other jurisdictions – there is no shortage of precedent to draw on. Best practice should be employed here. However, we ultimately believe that market power issues are *less of a concern* for such an LSE obligation than they are in an energy-only market, insofar as LSEs ultimately have a three year forward timeline to comply with the

obligation. This allows for new entry of resources to address net short positions. Furthermore, the compliance level (i.e., peak demand plus some reserve margin) is more predictable. On the other hand, real time energy supply-demand matching comes with more uncertainty, and when retailers find themselves in a net short position, there are simply fewer resource options (in the short-run) to meet this shortfall – they are a price taker and must buy energy at whatever price is available. A reasonable ramp up schedule could further mitigate this concern by managing capacity origination left to the last minute, thus avoiding large net short positions (at the same time, it should not impose requirements on LSEs too early in the process, or risks limiting their options).

c. What is the impact on self-supplying large industrial consumers who will have to comply with the LSE Obligation and will it impact their decision to site in Texas?

These customers can be catered to in a way that ensures fair treatment, depending on how they use the grid. Insofar as they do not draw on the system during the peak period and can be treated from a system perspective as interruptible load (i.e., they can commit to not drawing on the system at times of peak demand), they would not contribute to system needs during the peak windows and their obligations should reflect this.

These customers would see material negative cost impacts under alternatives, such as arbitrary resource firming requirements, backdoor capacity procurements, or resource payments that are less reliable means of achieving a given level of resource adequacy.

d. What is the impact of an LSE Obligation on load-serving entities that do not offer retail choice, such as municipally owned utilities or electric cooperatives?

These entities should be treated in a similar fashion to all other entities – insofar as they are a net draw on the system during peak periods today (i.e., they do not have sufficient resources to meet their demand during the system peak), the LSE RO may increase their procurements. In cases where they have as much or more reliable supply than needed during the system peak, they would not be negatively impacted and could even benefit from this by offering and being compensated for their net capacity surplus.

e. <u>Can market power be monitored in the bilateral market if an LSE Obligation is implemented in ERCOT? Can protective measures be put in place to ensure that market power is effectively monitored in ERCOT with an LSE Obligation? If so, please specify what measures.</u>

Yes, this is a completely solvable issue, and there is substantial precedent to draw on.

f. Should the LSE Obligation include a "must offer" provision? If so, how should it be structured?

Possibly – the LSE RO should have a complete set of incentives to ensure that resources being compensated are delivering in a fashion that is commensurate with their offerings. There are various options for effectuating this, and ERCOT should study this issue closely in determining a design.

- 7. How should an LSE Obligation be accurately and fairly determined for each LSE? What is the appropriate segment of time for each obligation? (Months? Weeks? 24 hour operating day? 12 hour segments? Hourly?)
- The LSE obligation should be sufficiently granular to ensure supply during times of greatest system stress. For instance, at a minimum, this would require distinguishing between the summer and winter periods, during which resource contributions and weather 'event' risks are materially different in nature.
- 8. Can the reliability needs of the system be effectively determined with an LSE Obligation? How should objective standards around the value of the reliability-providing assets be set on an on-going basis? The reliability needs of the system can be effectively determined through a robust administrative process at ERCOT, which should account for different extremes and employ a forward-looking approach. There is substantial precedent elsewhere on which to draw to ensure that this is being done in a robust fashion, and significant capabilities at ERCOT today which can be built on towards the end of molding this process to the idiosyncrasies and changing needs of the ERCOT system.

These reliability needs can then be effectively *implemented* in a reliable fashion through an LSE RO.

This can be done on an ongoing basis by giving ERCOT the mandate to revisit this annually and the flexibility to account for changes in the system over time – this requires that the Commission not be unduly prescriptive in the set of regulations emerging from this process regarding specific details of the LSE RO and instead leave these to a process at ERCOT.

- a. Are there methods of accreditation that can be implemented less administrative burden or need for oversight, while still allowing for all resources to be properly accredited?
   ERCOT should be given the mandate to determine the appropriate process for assessing resources to balance competing goals of accuracy and managing administrative burdens.
- b. How can winter weather standards be integrated into the accreditation system?

  As noted in response to question (7), ERCOT should be allowed to determine the appropriate level of granularity when assessing supply (as well as demand), but this should at least distinguish between the summer and winter seasons to account for material differences in resource contributions and risk of extreme 'events' during these periods.
- and at all points in time?

  This can be done by closely assessing the contribution of different DR products to Resource

  Adequacy, accounting for the reliability of these products. There is substantial precedent in other markets for determining a robust approach to capacity accreditation for these resources. Load resources can manage individual asset opt-out risk through a portfolio approach as they do today to ensure firm commitments can be met.

9. How can the LSE Obligation be designed to ensure demand response resources can participate fully

- 10. How will an LSE Obligation incent investment in existing and new dispatchable generation? Dispatchable generation with reliable fuel sources should receive a much higher capacity value than those without reliable fuel sources. In instances where the market is tight, this should result in tangible revenues that they would otherwise not have had access to.
- 11. <u>How will an LSE Obligation help ERCOT ensure operational reliability in the real-time market (e.g., during cold weather events or periods of time with higher than expected electricity demand and/or lower than expected generation output of all types)?</u>

The LSE RO process should ensure adequate reliable capacity during system stress events. Namely, in ERCOT's annual assessment, it should account for such events in making assessments about the supply curve (including capacity value credited to different resource types) and the demand curve (via the target reserve margin). It can then ensure that resources show up to the degree that they

committed to doing so through a performance incentive scheme that takes into account actual performance by resource versus their commitments.

12. What mechanism will ensure those receiving revenue streams for the reliability services perform adequately?

At a minimum, there should be penalties assessed for resources that underperform during periods of system stress, and rewards for resources that overperform. Unreliable resources will invest in making their output more reliable (e.g., adding on-site fuel for thermal resources; adding batteries for intermittent resources) in cases where this is economic to access more revenues through the LSE RO construct and avoid penalties for underperformance/earn rewards for overperformance, in addition to accessing revenues elsewhere in the energy and ancillary services markets. Furthermore, ERCOT may consider employing a disqualification/derating provision in cases of repeat underperformance by resources – i.e., constraining the amount of capacity that they can offer to align with historical performance.

13. What is the estimated market and consumer cost impact if an LSE obligation is implemented in ERCOT? Describe the methodology used to reach the dollar amount.

This requires further study and depends on the design details and whether resources can find adequate revenues outside of the LSE RO construct. Insofar as adequate capacity is incentivized through the energy market, the LSE RO mechanism would either not be triggered or, if there is no trigger construct (i.e., as in Lake's Memo), the costs would be minor. However, if existing capacity was adequate but not reliable, there would be a cost related to 'firming up' to meet performance obligations (prices would reflect the cost of meeting performance obligations/taking on performance risk).

In essence, this construct would 'top up' resources to the degree that this was needed to meeting Resource Adequacy and/or Reliability needs. We think that any associated costs would be greatly outweighed by system reliability benefits – costs would be far less than the costs that come with resource deficiency, as illustrated by the immense human and financial costs of Uri.

# 14. How long will the LSE Obligation plan take to implement?

The Commission should propose a high-level construct and principles to be implemented by ERCOT coming out of the 52373 proceeding, and request that ERCOT should immediately start on implementation. This should allow for a robust process with healthy stakeholder engagement to determine the details of the construct and undertake its first assessment at the end of 2022 or beginning of 2023, effectuating the first LSE RO in calendar year 2026. This gives the market three years to respond to these needs in the most economic fashion, whether that be building new capacity, enhancing existing capacity through investment in on-site fuel or firm fuel supply contracts, installing on-site batteries, incentivizing LSEs to find customers willing to provide demand response or accept interruptible supply (provide interruptible load), or various other options for increasing reliable capacity in the system.

15. If the Commission adopts an LSE Obligation, what assurances are necessary to ensure transparency and promote stability within retail and wholesale electric markets?

ERCOT should be instructed to study closely and solicit feedback on the appropriate market design elements to mitigate wholesale (generator) market power and avoid substantially increasing the barriers to entry or favoring large incumbents in the retail market. We think that both of these goals are achievable under the LSE RO construct.

# **Executive Summary**

Regulatory reforms should be considered within and outside of the electricity market to ensure that the Texas integrated natural gas and electric systems can deliver reliable and affordable electric service to end-users going forward. We recommend applying a structured framework for considering and evaluating these reforms that considers three key objectives: Resource adequacy, resource reliability, and system operability, against achievable implementation timelines. Our recommendations under this framework are described in the table below.

Objective	Near-term Actions	Medium-term Actions
Resource	ORDC Reform: reform the ORDC curve	LSE RO: this could be implemented in a way
Adequacy	(lower VOLL; right-extension of shape) to	that is efficient at effectively achieving a
	create a more stable incentive, making this	given reliability standard without
	a more financeable (actionable) price signal	substantially overhauling the current
	for driving new investment.	market structure or imposing undue costs
		on consumers.
Resource	ORDC Reform: a more stable construct	LSE RO: this could be implemented in a way
Reliability	could also increase investment in resource	that efficiently incentivizes resources to
	reliability enhancements (e.g., fuel supply	invest in becoming more reliable and
	resilience).	performing in accordance with their
	Weatherization: implement common sense	offerings in the market through accurate
	weatherization reforms that see outsized	capacity accreditation and robust
	benefits vs costs.	performance incentives, obviating the need
		for 'backdoor' capacity constructs such as
		the winter AS product.
System	Ongoing Reforms: continue to implement	New Reforms: ERCOT should study,
Operation	important ongoing reforms, most notably	identify, and then implement reforms to
	the implementation of real-time co-	account for evolving system dynamics such
	optimization of the ancillary services and	as declining levels of inertia, which could
	energy markets.	include the introduction of new ancillary
	Participation: expand resource eligibility for	services and/or reforms to existing ones.
	providing ancillary services to allow for	
	technology-neutral provision of services at	
	least cost.	

It is critical that in implementing the above reforms, the Commission undertake deliberative cost-benefit analysis and not rush any reforms ahead of doing so. In the case of the LSE RO in particular,

the Commission should not be overly prescriptive with the details of the design or the required implementation timeline, or otherwise risks constraining ERCOT's ability to effectively implement it in the face of complex and evolving market dynamics. The Commission should establish a high-level framework and key guiding principles, and then require that ERCOT fill in the details through a robust study process with significant stakeholder involvement, giving them sufficient time to do so.